

REMARKS

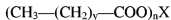
The Applicant would like to thank the Examiner for the courteous Office Action.

Claims 1-10, 12-25, and 27-44 are present in the application. Claims 1-10, 12-25 and 27-31 have been allowed, for which the Applicants are very grateful. Claims 32-44 have been rejected. Claims 32, 36-38, and 43-44 have been amended herein; no new matter has been added.

35 U.S.C. §103 Rejection

The Examiner has still rejected claims 32-44 under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Pat. No. 6,248,699 to Subramanian, et al. for reasons of obviousness.

The Examiner noted that the Applicants' arguments filed 04 December 2006 were fully considered, but that they were not persuasive. As previously set forth, the Examiner finds that Subramanian, et al. discloses improved hydrocarbon *gels* useful in oil field applications including slurry pipeline transport. Subramanian, et al. is further seen to disclose a *gelled* hydrocarbon fluid useful as a fracturing fluid in subterranean formations comprising at least one *gelling agent* which is a salt of a carboxylic acid having about 6 to about 30 carbon atoms. Subramanian, et al. is additionally noted to teach that the *gelling agents* may be prepared by heating the carboxylic acid with a multivalent metal compound. Preferably a ratio of about two or three carboxylic acid equivalents to one metal is formed as represented by the formula:



wherein y is 6 to 28, n is 2 or 3 and X is a multivalent metal such as aluminum. The Examiner finds that Subramanian, et al. also teaches that the *gelling agents* may be added directly to hydrocarbon liquids or to a mixture of hydrocarbon liquids. Suitable hydrocarbon liquids used in the fracturing process of the prior art include diesel fuel, crude oil, Fracsolve® fracturing liquid, toluene, xylene, hexane, or other hydrocarbon solvents. Subramanian, et al. is further seen to teach that the *gelling agents* may be added to the hydrocarbon liquids in amounts of less than about 20%, preferably less than about 10% and most preferably less than about 5% by weight of the mixture. See column 5, lines 20-28. The Examiner asserts that Subramanian, et al. also allows for the addition of

at least one salt of a carboxylic acid. The Examiner is of the position that Subramanian, et al. meets the limitations of the drag reducing composition of the claims which include an aluminum monocarboxylate or aluminum dicarboxylate, in combination with a hydrocarbon solvent. The Examiner also maintains the position that the drag reducing dispersion compositions of claims 32-37 and the methods of making the drag reducing dispersion compositions of claims 38-44 are taught by the prior art. The Examiner again notes that has been held that a recitation of the intended use such as “reducing drag of a fluid” carries no weight in the claims since the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art; and that if the prior art structure is capable of performing the intended use, then it meets the claims. (Emphasis added.)

The Applicants respectfully traverse.

To support an obviousness rejection, the Examiner has the initial burden of establishing a *prima facie* case of obviousness of the pending claims over the cited prior art, *In re Oeticker*, 977 F.2d 1443, 1445; 24 U.S.P.Q.2d 1443 (Fed. Cir. 1992). Applicants respectfully submit that the Examiner has not established such a *prima facie* case of obviousness herein for the claims as amended herein.

The Examiner’s attention is respectfully directed to the amendment to independent claim 32 herein where the aluminum dicarboxylate has been further defined to recite where the dicarboxylate moieties are linear, independent claim 37 has been amended to define the carboxylic acid as linear, and claims 36, 37, 43 and 44 have been amended to delete any reference to “hydroxyaluminum bis-(2-ethylhexanoate)”, a branched compound. Claim 38 has been amended to recite that the carboxylate moiety on the aluminum monocarboxylate is linear, and that the carboxylic acid is linear. Support for these amendments is found in the specification as filed in paragraphs [0026] to [0027], page 6, line 23 to page 7, line 5, where the carboxylic acids are described as “linear or branched”. The Applicants are limiting the recitation to linear. Thus, no new matter is improperly included in the claims.

The Examiner would respectfully note the following passage from Subramanian, et al. at column 3, lines 43-51:

*The carboxylic acids are preferably branched, and have from about 6 to about 30 carbon atoms. A preferable branched carboxylic acid for use herein is 2-ethylhexanoic acid. Linear carboxylic acids may also be utilized in combination with the branched carboxylic acids of the present invention, a preferable linear carboxylic acid being octanoic acid. The linear carboxylic acids do not appear to gel sufficiently, or to have a sufficient increase in viscosity, when utilized **alone** in hydrocarbon solvents. (All emphasis added.)*

The Applicants respectfully submit that Subramanian, et al. in this paragraph *teaches away from* using linear carboxylic acids alone to make their gelling agents. The claims herein have been limited to the use of only linear carboxylic acids and are thus now outside the teachings of Subramanian, et al.

An obviousness rejection cannot stand if the references teach away from the invention, *In re Hedges* 228 U.S.P.Q. 685, 687, 837 F.2d 473 (Fed. Cir. 1986).

A reference which leads one of ordinary skill in the art away from the claimed invention cannot render it unpatentably obvious. *Dow Chemical Co. v. American Cyanamid Co.* 816 F.2d 617, 2 U.S.P.Q.2d 1350 (Fed. Cir. 1987); *In re Grasselli, et al.*, 713 F.2d 731, 218 U.S.P.Q. 269 (Fed. Cir. 1983); *In re Dow Chemical Co.* 837 F.2d 469, 5 U.S.P.Q.2d 1529 (Fed. Cir. 1988).

The Examiner's attention is further respectfully directed to *In re Haruna, et al.*, 249 F.3d 1327, 1335; 58 U.S.P.Q. 2d 1517 (Fed. Cir. 2001):

"A prima facie case of obviousness can be rebutted if the applicant ... can show 'that the art in any material respect taught away' from the claimed invention." *In re Geisler*, 116 F.3d 1465, 1469, 43 U.S.P.Q.2d (BNA) 1362, 1365 (Fed. Cir. 1997) (quoting *In re Malagari*, 499 F.2d 1297, 1303, 182 U.S.P.Q. (BNA) 549, 533 (CCPA 1974)). "A reference may be said to teach away when a person of ordinary skill, upon reading the reference, ... would be led in a direction divergent from the path that was taken by the applicant." *Tec Air, Inc. v. Denso Mfg. Mich. Inc.*, 192 F.3d 1353, 1360, 52 U.S.P.Q.2d (BNA) 1294, 1298 (Fed. Cir. 1999).

Subramanian, et al. repeatedly teaches in the paragraph excerpted above that branched carboxylic acids are preferred, but goes further and teaches that using linear

carboxylic acids alone are not suitable because the “do not appear to gel sufficiently” or to “have sufficient increase in viscosity when utilized *alone* in hydrocarbon solvents”. Indeed Subramanian, et al. also instructs that linear carboxylic acids are suitable for use only in combination with branched carboxylic acids. The Applicants’ claims are limited to aluminum dicarboxylates where the dicarboxylate moieties are linear. Branched dicarboxylic acids and their moieties are no longer encompassed. The Applicants thus respectfully submit that the Subramanian, et al. is teaching away from the claimed invention because it leads one having ordinary skill in the art in a direction divergent from the path taken by the Applicants in the amended claims. The claimed invention, as amended, is thus structurally different from that taught by the reference. For this reason the Applicants respectfully submit that a *prima facie* 35 U.S.C. §103 rejection has not been made, and the present rejection should be withdrawn. Reconsideration is respectfully requested.

Request for Entry of Amendment

The Applicants would respectfully request that the instant Amendment be entered under 37 CFR §1.116(b): “Amendments presenting rejected claims in better form for consideration on appeal may be admitted.” It is respectfully noted that the rejected claims have been amended herein to recite that the drag reducing dispersion compositions contain aluminum dicarboxylates where the dicarboxylate moieties are linear, or, correspondingly, the aluminum dicarboxylates are made with linear carboxylic acids. This issue has not yet been of record. These amendments place the rejected claims in better form for consideration on appeal by narrowing and focusing the issue. It is respectfully submitted that for all of these reasons, which simplify and narrow the issues, the instant Amendment should be entered.

Further, the Applicants would respectfully submit that the instant amendment be entered under 37 CFR §1.116(c): “If amendments touching the merits of the application or patent under reexamination are presented after final rejection, or after appeal has been taken, or when such amendment might not otherwise be proper, they may be admitted upon showing of good and sufficient reasons why they are necessary and were not earlier presented.” The Applicants submit that the reason why the amendments above and

arguments below are necessary and were not earlier presented is simply because the rejection of claims 32-44 was not fully developed before the final rejection, receiving only cursory attention in the first Action of October 4, 2006. For the Applicants to have any hope of being assured of a chance to address the instant rejection fully, the amendments and arguments herein should be entered and considered. Consideration of this request to enter the subject Amendment is earnestly solicited.

It is respectfully submitted that the amendments and arguments presented above overcome the rejection and place the claims and application in condition for allowance. Reconsideration and allowance of the claims are respectfully requested. The Examiner is respectfully reminded of her continuing duty to indicate allowable subject matter. The Examiner is also invited to call the Applicant's attorney at the number below for any reason, especially for any reason that may help advance the prosecution.

Respectfully submitted,
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